## § 3.209

the national bank's or Federal savings association's incremental risk model and its comprehensive risk model described in section 209 of this subpart, if applicable.

- (iv) A national bank's or Federal savings association's treatment of liquidity horizons must be consistent between the national bank's or Federal savings association's incremental risk model and its comprehensive risk model described in section 209, if applicable.
- (2) Recognize the impact of correlations between default and migration events among obligors.
- (3) Reflect the effect of issuer and market concentrations, as well as concentrations that can arise within and across product classes during stressed conditions.
- (4) Reflect netting only of long and short positions that reference the same financial instrument.
- (5) Reflect any material mismatch between a position and its hedge.
- (6) Recognize the effect that liquidity horizons have on dynamic hedging strategies. In such cases, a national bank or Federal savings association must:
- (i) Choose to model the rebalancing of the hedge consistently over the relevant set of trading positions;
- (ii) Demonstrate that the inclusion of rebalancing results in a more appropriate risk measurement;
- (iii) Demonstrate that the market for the hedge is sufficiently liquid to permit rebalancing during periods of stress; and
- (iv) Capture in the incremental risk model any residual risks arising from such hedging strategies.
- (7) Reflect the nonlinear impact of options and other positions with material nonlinear behavior with respect to default and migration changes.
- (8) Maintain consistency with the national bank's or Federal savings association's internal risk management methodologies for identifying, measuring, and managing risk.
- (c) Calculation of incremental risk capital requirement. The incremental risk capital requirement is the greater of:
- (1) The average of the incremental risk measures over the previous 12 weeks: or

(2) The most recent incremental risk measure.

## § 3.209 Comprehensive risk.

- (a) General requirement. (1) Subject to the prior approval of the OCC, a national bank or Federal savings association may use the method in this section to measure comprehensive risk, that is, all price risk, for one or more portfolios of correlation trading positions.
- (2) A national bank or Federal savings association that measures the price risk of a portfolio of correlation trading positions using internal models must calculate at least weekly a comprehensive risk measure that captures all price risk according to the requirements of this section. The comprehensive risk measure is either:
  - (i) The sum of:
- (A) The national bank's or Federal savings association's modeled measure of all price risk determined according to the requirements in paragraph (b) of this section; and
- (B) A surcharge for the national bank's or Federal savings association's modeled correlation trading positions equal to the total specific risk add-on for such positions as calculated under section 210 of this subpart multiplied by 8.0 percent; or
- (ii) With approval of the OCC and provided the national bank or Federal savings association has met the requirements of this section for a period of at least one year and can demonstrate the effectiveness of the model through the results of ongoing model validation efforts including robust benchmarking, the greater of:
- (A) The national bank's or Federal savings association's modeled measure of all price risk determined according to the requirements in paragraph (b) of this section; or
- (B) The total specific risk add-on that would apply to the bank's modeled correlation trading positions as calculated under section 210 of this subpart multiplied by 8.0 percent.
- (b) Requirements for modeling all price risk. If a national bank or Federal savings association uses an internal model to measure the price risk of a portfolio of correlation trading positions:

- (1) The internal model must measure comprehensive risk over a one-year time horizon at a one-tail, 99.9 percent confidence level, either under the assumption of a constant level of risk, or under the assumption of constant positions
- (2) The model must capture all material price risk, including but not limited to the following:
- (i) The risks associated with the contractual structure of cash flows of the position, its issuer, and its underlying exposures;
- (ii) Credit spread risk, including nonlinear price risks;
- (iii) The volatility of implied correlations, including nonlinear price risks such as the cross-effect between spreads and correlations;
  - (iv) Basis risk;
- (v) Recovery rate volatility as it relates to the propensity for recovery rates to affect tranche prices; and
- (vi) To the extent the comprehensive risk measure incorporates the benefits of dynamic hedging, the static nature of the hedge over the liquidity horizon must be recognized. In such cases, a national bank or Federal savings association must:
- (A) Choose to model the rebalancing of the hedge consistently over the relevant set of trading positions;
- (B) Demonstrate that the inclusion of rebalancing results in a more appropriate risk measurement;
- (C) Demonstrate that the market for the hedge is sufficiently liquid to permit rebalancing during periods of stress; and
- (D) Capture in the comprehensive risk model any residual risks arising from such hedging strategies;
- (3) The national bank or Federal savings association must use market data that are relevant in representing the risk profile of the national bank's or Federal savings association's correlation trading positions in order to ensure that the national bank or Federal savings association fully captures the material risks of the correlation trading positions in its comprehensive risk measure in accordance with this section; and
- (4) The national bank or Federal savings association must be able to demonstrate that its model is an appro-

- priate representation of comprehensive risk in light of the historical price variation of its correlation trading positions.
- (c) Requirements for stress testing. (1) A national bank or Federal savings association must at least weekly apply specific, supervisory stress scenarios to its portfolio of correlation trading positions that capture changes in:
  - (i) Default rates;
  - (ii) Recovery rates;
  - (iii) Credit spreads;
- (iv) Correlations of underlying exposures; and
- (v) Correlations of a correlation trading position and its hedge.
- (2) Other requirements. (i) A national bank or Federal savings association must retain and make available to the OCC the results of the supervisory stress testing, including comparisons with the capital requirements generated by the national bank's or Federal savings association's comprehensive risk model.
- (ii) A national bank or Federal savings association must report to the OCC promptly any instances where the stress tests indicate any material deficiencies in the comprehensive risk model.
- (d) Calculation of comprehensive risk capital requirement. The comprehensive risk capital requirement is the greater of:
- (1) The average of the comprehensive risk measures over the previous 12 weeks: or
- (2) The most recent comprehensive risk measure.

## § 3.210 Standardized measurement method for specific risk

(a) General requirement. A national bank or Federal savings association must calculate a total specific risk add-on for each portfolio of debt and equity positions for which the national bank's or Federal savings association's VaR-based measure does not capture all material aspects of specific risk and for all securitization positions that are not modeled under §3.209. A national bank or Federal savings association must calculate each specific risk addon in accordance with the requirements of this section. Notwithstanding any other definition or requirement in